

**AMENDMENTS TO THE CLAIMS**

1-6. (Canceled)

7. (Canceled)

8. (Currently amended) A process for producing a  $\beta$ -hydroxyhydroperoxide compound or a carbonyl compound, which comprises reacting an olefin with hydrogen peroxide in the pH range of 0 or more and less than 2 in the presence of ~~the metal catalyst according to claim 1~~ a metal catalyst obtained by contacting

(A) at least one metal or metal compound selected from

i) tungsten compounds composed of tungsten and an element of group IIIb, IVb, Vb, or VIb,

ii) molybdenum compounds composed of molybdenum and an element of group IIIb, IVb, Vb, or VIb, and

iii) tungsten metal and molybdenum metal;

(B) at least one compound selected from tertiary amine oxide compounds and nitrogen-containing aromatic N-oxide compounds;

(C) hydrogen peroxide; and

(D) a phosphate compound.

9. (Currently amended) A process for producing a carbonyl compound, which comprises reacting a primary or secondary alcohol with hydrogen peroxide in the presence of ~~the metal catalyst according to claim 1~~ a metal catalyst obtained by contacting

(A) at least one metal or metal compound selected from

i) tungsten compounds composed of tungsten and an element of group IIIb, IVb, Vb, or VIb,

ii) molybdenum compounds composed of molybdenum and an element of group IIIb, IVb, Vb,  
or VIb, and

iii) tungsten metal and molybdenum metal;

(B) at least one compound selected from tertiary amine oxide compounds and nitrogen-  
containing aromatic N-oxide compounds;

(C) hydrogen peroxide; and

(D) a phosphate compound.